AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of Claims:

1.   (Currently Amended) A method of guaranteeing users' anonymity in a wireless Local Area Network (LAN) system, the method comprising:

(a) creating a plurality of temporary address sets by randomly transforming, ~~each of which corresponds to~~ a unique Media Access Control (MAC) address of a wireless terminal, and transmitting each temporary address set to the corresponding wireless terminal; and

(b) performing data packet transmissions between a wireless terminal and a wireless access node using a temporary address selected from the temporary address set corresponding to the wireless terminal as a source address or a destination address.

2.   (Original)   The method as claimed in claim 1, wherein in (a), the wireless access node creates the temporary address sets, each of which consists of N (where N is an integer greater than or equal to two) temporary addresses using a MAC address contained in an access or authentication request message transmitted from a corresponding wireless terminal.

3.   (Original)   The method as claimed in claim 1, wherein in (a), the wireless access node encodes the temporary address sets using a predetermined encryption key for each temporary address set, and respectively transmits the encoded temporary address sets to the corresponding wireless terminals.

4.   (Original)   The method as claimed in claim 3, wherein each encryption key is created upon authentication of the corresponding wireless terminal.

5.   (Original)   The method as claimed in claim 1, wherein (b) further comprises:

(b1) a first addressing, which is performed in the wireless access node, and generates a temporary address as a destination address randomly selected from the temporary address set corresponding to a wireless terminal that is requesting authentication.

6.   (Original)   The method as claimed in claim 5, wherein (b) further comprises:

(b2) a second addressing, which is performed in the wireless terminal, and generates a temporary address as a source address randomly selected from the temporary address set corresponding to the wireless terminal.

7.   (Currently Amended) A tangible computer readable medium having embodied thereon a computer program for the method claimed in claim 1.

8.   (Currently Amended) A tangible computer readable medium having embodied thereon a computer program for the method claimed in claim 3.

9.   (Currently Amended) A tangible computer readable medium having embodied thereon a computer program for the method claimed in claim 6.

10.   (Currently Amended) A wireless Local Area Network (LAN) system of guaranteeing users' anonymity comprising:

a wireless access node, which creates a plurality of temporary address sets by randomly transforming , each of which corresponds to a unique Media Access Control (MAC) address of a wireless terminal, and uses a temporary address selected from each temporary address set as a destination address; and

at least one wireless terminal, which receives a temporary address set corresponding to a unique MAC address thereof from among the plurality of temporary address sets created in the wireless access node, and uses a temporary address selected from the received temporary address set as a source address.

11.   (Original)   The system as claimed in claim 10, wherein the wireless access node creates the temporary address sets, each of which consists of N (where N is an integer greater than or equal to two) temporary addresses, using for each address set the MAC address contained in an access or authentication request message transmitted from the corresponding wireless terminal.

12.   (Original)   The system as claimed in claim 10, wherein the wireless access node encodes the temporary address sets using a predetermined encryption key for each address set, and respectively transmits the encoded temporary address sets to the corresponding wireless terminals.

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13.   (Original)   The system as claimed in claim 12, wherein each encryption key is created upon authentication of the corresponding wireless terminal.

14.   (Original)   The system as claimed in claim 10, wherein the wireless access node comprises:

a first memory, which stores the plurality of temporary address sets, each of which consists of N (where N is an integer greater than or equal to two) random addresses and is created corresponding to a unique MAC address;

a first MAC address filter, which filters a unique MAC address from a source address of a data packet received from a corresponding wireless terminal by referring to the temporary address sets stored in the first memory;

a destination address generation unit, which enables a temporary address set corresponding to the unique MAC address of the wireless terminal requesting authentication from among the temporary address sets stored in the first memory, generates a first random selection signal, generates a temporary address randomly selected from the enabled temporary address set, and uses the temporary address as a destination address; and

a first random selection unit which randomly selects a temporary address from the temporary address set enabled in the first memory according to the first random selection signal generated in the destination address generation unit, and outputs the selected temporary address to the destination address generation unit.

15.   (Currently Amended) The system as claimed in claim [[10]] 14, wherein the wireless terminal comprises:

a second memory which receives a temporary address set from the wireless access node

and stores the temporary address set corresponding to a unique MAC address of the wireless

terminal;

a second MAC address filter which determines whether a destination address of a data

packet received from the wireless access node is included in the temporary address set by

referring to the temporary address set stored in the second memory, and generates a receipt

enable signal according to a determination result;

a source address generation unit, which generates a second random selection signal

according to a source address request signal, generates a temporary address randomly selected

from the temporary address set stored in the second memory, and uses the temporary address as a

source address; and

a second random selection unit which randomly selects a temporary address from the

temporary address set stored in the second memory according to the second random selection

signal generated in the source address generation unit, and outputs the selected temporary

address to the source address generation unit.

16.   (New) A wireless access node of guaranteeing users' anonymity comprising:

a memory, which stores a plurality of temporary address sets, each of which consists of N

(where N is an integer greater than or equal to two) random addresses and is created by randomly

transforming a unique MAC address of a wireless terminal; and

a destination address generation unit, which enables a temporary address set

corresponding to the unique MAC address of the wireless terminal requesting authentication

from among the temporary address sets stored in the memory, generates a temporary address

randomly selected from the enabled temporary address set, and uses the temporary address as a

destination address.

    17.   (New) The wireless access node claimed in claim 16 further comprising:

    an MAC address filter, which filters the unique MAC address from a source address of a

data packet received from a corresponding wireless terminal by referring to the temporary

address sets stored in memory.

    18.   (New) The wireless access node claimed in claim 17 further comprising:

    a random selection unit, which randomly selects a temporary address from the temporary

address set enabled in the memory according to a random selection signal, and outputs the

selected temporary address to the destination address generation unit.

    19.   (New) A wireless terminal of guaranteeing users' anonymity comprising:

    a memory, which receives a temporary address set created by randomly transforming a

unique MAC address of the wireless terminal from a wireless access node, and stores the

temporary address set; and

    a source address generation unit, which generates a temporary address randomly selected

from the temporary address set stored in the memory, and uses the temporary address as a source

address.

    20.   (New) The wireless terminal claimed in claim 19 further comprising:

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an MAC address filter which determines whether a destination address of a data packet received from the wireless access node is included in the temporary address set by referring to the temporary address set stored in the memory, and generates a receipt enable signal according to a determination result.

21.   (New) The wireless terminal claimed in claim 20 further comprising:

a random selection unit which randomly selects a temporary address from the temporary address set stored in the memory according to a random selection signal generated from a source address request signal, and outputs the selected temporary address to the source address generation unit